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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,515	01/30/2006	Pankaj Shrivastava	PHUS030254	7347
65913	7590	06/07/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER KNOLL, CLIFFORD H	
			ART UNIT 2111	PAPER NUMBER
			MAIL DATE 06/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/566,515

**Applicant(s)**

SHRIVASTAVA ET AL.

**Examiner**

Clifford H. Knoll

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/30/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Oath/Declaration***

This Application has been filed under 35 U.S.C. 371 as a National Stage Application. Upon review of the Declaration, the Examiner notes that no formal claim for priority identifying the International Application and Provisional Application has been established in the record. Therefore, although the Application has been considered on the merits, under 35 U.S.C. 371 a formal claim to priority has not been established. Applicant is advised to submit either a new Oath or Declaration or a separate claim for priority.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 20, the "streams other than have stored therein" is unclear because the intended grammatical sense cannot be determined.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 11, 13-16, and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsuhiro (US 5155853 A).

Regarding claims 1 and 21, Mitsuhiro discloses the register bank blocks (e.g., Fig. 1, "36"), the decoder circuit for activating one of the bank blocks (e.g., Fig. 1, "44") where different interrupt event operations result in selecting different ones of the blocks (e.g., col. 4, lines 39-44).

Regarding claim 2, Mitsuhiro also discloses the execution of the first program stream, and executing the second stream associated with an interrupt event (e.g., col. 6, lines 4-9).

Regarding claim 3, Mitsuhiro also discloses the second program stream has higher priority than the first (e.g., col. 5, lines 35-40).

Regarding claims 4 and 5, Mitsuhiro also discloses multiplexing the input data bus by receiving a register bank selection signal coupling the activated register bank block to the input data bus (e.g., col. 6, lines 5-7).

Regarding claims 6 and 7, Mitsuhiro also discloses multiplexing the output data bus by receiving a register bank selection signal coupling the activated register bank block to the output data bus (e.g., col. 6, lines 7-9).

Regarding claim 11, Mitsuhiro also discloses first and second bank blocks are currently enabled and independently addressable (e.g., col. 4, lines 51-54).

Regarding claim 13, Mitsuhiro discloses the register bank blocks (e.g., Fig. 1, "36"), the decoder circuit for activating one of the bank blocks (e.g., Fig. 1, "44"), receiving and determining if an interrupt is to be fulfilled (e.g., col. 6, lines 4-9), and if so selecting a second block isolated from the first ones of the blocks (e.g., col. 4, lines 39-44).

Regarding claim 14, Mitsuhiro also discloses the execution of the first program stream, and executing the second stream (e.g., col. 6, lines 4-9).

Regarding claim 15, Mitsuhiro also discloses the second program stream has higher priority than the first (e.g., col. 5, lines 35-40).

Regarding claim 16, Mitsuhiro also discloses the processor (e.g., Fig. 1, "16").

Regarding claim 19, Mitsuhiro also discloses the memory circuit with program stream data (e.g., Fig. 1, "28").

Regarding claim 20, Mitsuhiro also discloses instructions for storing and restoring register bank block contents (e.g., col. 6, line 67 – col. 7, lines 10).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuhiro, as applied supra, in view of Fujimura (US 5751988 A).

Regarding claim 8, Mitsuhiro neglects to expressly mention returning from an interrupt and the need to restore existing conditions; however, this is widely known as seen in Fujimura (e.g., col. 2, lines 45-49). It would have been obvious to one of ordinary skill in the art to combine Fujimura with Mitsuhiro because Fujimura teaches a means to return to the register bank block selection that was interrupted in order to continue operating upon completion of the higher priority processing.

Regarding claim 9, Mitsuhiro also discloses the switching is based on priority (e.g., col. 5, lines 35-40). Fujimura teaches the storing upon interrupt (e.g., col. 2, lines 28-32).

Regarding claim 10, Mitsuhiro also discloses the bank signal is solely based on interrupt priority (e.g., col. 5, lines 34-37, all conditions listed considered a prioritization of signal).

Regarding claim 17, Mitsuhiro also discloses selecting the first register block (e.g., col. 5, lines 35-37), halting execution of the second program stream (e.g., col. 16, lines 18-21), but does not expressly mention resuming execution of the first program stream; however this is widely known as seen in Fujimura (e.g., col. 2, lines 45-49). It would have been obvious to one of ordinary skill in the art to combine Fujimura with Mitsuhiro because Fujimura teaches a means to return to the register bank block selection that was interrupted in order to continue operating upon completion of the higher priority processing.

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Regarding claim 18, Mitsuhiro also discloses executing the second program stream does not alter contents of the first register bank block in suspended use (e.g., col. 6, lines 1-3).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuhiro, as applied supra, in view of standard debugging techniques, as evidenced by Hohl (US 6035422 A).

Regarding claim 12, Mitsuhiro also discloses a register for access to a plurality of bank blocks (e.g., col. 4, lines 51-54), but neglects to mention a step of debugging; however, Examiner takes Official Notice it is widely known to access all register data during debugging as evidenced by Hohl (e.g., col. 34, lines 62-64). It would have been obvious to one of ordinary skill in the art to combine widely known debug techniques to Mitsuhiro because providing full access to operational data during debug maximizes the amount of information to bear on a problem that is being debugged.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyano (US 6795911 B1), Wojewoda (US 6029241 A), Zhou (US 5913924 A), Ogata (US 5426766 A) all teach register bank blocks.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H. Knoll whose telephone number is 571-272-3636. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3636. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Clifford H Knoll/  
Clifford H Knoll  
Patent Examiner  
Art Unit 2111

chk